

**REMARKS**

Applicants respectfully request further examination and reconsideration in view of the above amendments and the comments set forth fully below. Claims 31-43 and 45-49 were pending. Within the Office Action, Claims 31-43 and 45-49 have been rejected. Accordingly, Claims 31-43 and 45-49 are now pending.

**Rejections Under 35 U.S.C. § 102**

Within the Office Action, Claims 31-33, 42, 43, 45, 47 and 48 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,133,045 to Johnson et al. (hereinafter "Johnson"). The applicants respectfully disagree.

Johnson teaches an automated sample treatment system. Johnson teaches a waste plate 230 thereby allowing fluid to flow from the columns 41 of the filter plate 40 and pass through the bores 232 and into the waste tray 200. [Johnson, col. 7, lines 55-59, Figure 6] Johnson teaches that a shuttle means 90 is actuated to move the waste plate 230 in liquid communication with the sample plate 40. [Johnson, col. 10, lines 7-9] Johnson also teaches that the vacuum control apparatus 320 may be operatively coupled to two separate vacuum manifolds and provide vacuum thereto under the control of a vacuum switch or three way valve. [Johnson, col. 11, lines 15-20, Figures 14-16] Johnson does not teach coupling a waste tube to a selective one of a first drain and a second drain by *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Johnson teaches a vacuum switch or three way valve. Johnson does not teach moving the same waste tube to a selective one of the first drain and the second drain.

In contrast to the teachings of Johnson, the multi-well rotary synthesizer of the present invention includes a controller, a plurality of precision fit vials circularly arranged in multiple banks on a cartridge, a drain corresponding to each bank of vials, a chamber bowl, a plurality of valves for delivering reagents to selective vials and a waste tube system for purging material from the vials. [Specification, p. 3, lines 8-11] The banks of vials can also be selectively purged, allowing the banks of vials to be used to synthesize different polymer chains. [Specification, p. 3, lines 8-11] The plurality of vials are held within the cartridge and divided among individual banks. [Specification, page 3, lines 15-16] Each individual bank of vials has a corresponding drain. [Specification, page 3, line 16] The reagent solution is purged from a bank of vials by rotating the cartridge until the corresponding drain is positioned above the waste tube system and

coupling the waste tube system to the corresponding drain. As discussed above, Johnson does not teach coupling a waste tube to a selective one of a first drain and a second drain by *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Johnson teaches a vacuum switch or three way valve.

The independent Claim 31 is directed to a method of selectively and sequentially dispensing a plurality of reagent solutions to a plurality of vials divided into a first bank of vials and a second bank of vials and selectively purging material from the first bank of vials and the second bank of vials. The method of Claim 31 comprises the steps of dispensing one or more of the plurality of reagent solutions to a selective one or more of the plurality of vials, to perform synthesis within the selective one or more of the plurality of vials, coupling a waste tube to a selective one of a first drain and a second drain within a purging system, wherein the first drain is associated with the first bank of vials and the second drain is associated with the second bank of vials, and purging material from the selected one of the first bank of vials and the second bank of vials through the purging system. It is further specified in Claim 31 that coupling the waste tube to a selective one of a first drain and a second drain comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. As discussed above, Johnson does not teach coupling a waste tube to a selective one of a first drain and a second drain within a purging system, wherein coupling comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Johnson teaches a vacuum switch or three way valve. For at least these reasons, the independent Claim 31 is allowable over the teachings of Johnson.

Claims 32, 33 and 45 are all dependent on the independent Claim 31. As described above, the independent Claim 31 is allowable over the teachings of Johnson. Accordingly, the Claims 32, 33 and 45 are all also allowable as being dependent on an allowable base claim.

The independent Claim 42 is directed to a method of selectively purging material from a selective one of a first vial and a second vial in which synthesis is taking place. The method of Claim 42 comprises coupling a waste tube to a selective one of a first drain corresponding to the first vial and a second drain corresponding to the second vial and forming a pressure differential between an interior and an exterior of the selective one of the first vial and the second vial, thereby expelling material from the selective one of the first vial and the second vial through the waste tube. It is further specified in Claim 42 that coupling the waste tube to a selective one of a

first drain and a second drain comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. As discussed above, Johnson does not teach coupling a waste tube to a selective one of a first drain and a second drain, wherein coupling comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Johnson teaches a vacuum switch or three way valve. For at least these reasons, the independent Claim 42 is allowable over the teachings of Johnson.

Claim 43 is dependent on the independent Claim 42. As described above, the independent Claim 42 is allowable over the teachings of Johnson. Accordingly, the Claim 43 is also allowable as being dependent on an allowable base claim.

The independent Claim 47 is directed to a method of selectively purging material from a selective one of a first vial and a second vial in which synthesis is taking place. The method of Claim 47 comprises coupling a waste tube with a selective one of a first drain and a second drain, wherein the first drain is associated with the first vial and the second drain is associated with the second vial, forming a pressure differential between an interior and an exterior of the selective one of the first vial and the second vial, thereby expelling material from the selective one of the first vial and the second vial through the waste tube and uncoupling the waste tube from the selective one of the first drain and the second drain after the material has been purged. It is further specified in Claim 47 that coupling the waste tube with a selective one of a first drain and a second drain comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. As discussed above, Johnson does not teach coupling a waste tube with a selective one of a first drain and a second drain, wherein coupling comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Johnson teaches a vacuum switch or three way valve. For at least these reasons, the independent Claim 47 is allowable over the teachings of Johnson.

The independent Claim 48 is directed to a method of selectively purging material from a selective one of a first vial and a second vial in which synthesis is taking place. The method of Claim 48 comprises coupling a waste tube with a selective one of a first drain and a second drain, wherein the first drain is associated with the first vial and the second drain is associated with the second vial and purging material from the selective one of the first vial and the second vial

through the waste tube. It is further specified in Claim 48 that coupling the waste tube with a selective one of a first drain and a second drain comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. As discussed above, Johnson does not teach coupling a waste tube with a selective one of a first drain and a second drain, wherein coupling comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Johnson teaches a vacuum switch or three way valve. For at least these reasons, the independent Claim 48 is allowable over the teachings of Johnson.

Within the Office Action, Claims 31, 42, 47 and 48 have been rejected under 35 U.S.C. § 102(a) as being anticipated by PCT Publication No. WO 98/00520 by Hashimoto et al. (hereinafter "Hashimoto"). The applicants respectfully disagree.

Hashimoto teaches an automatic testing apparatus. Hashimoto teaches that first and second drainage tubes C11-8 and C11-9 come below a discharge port of the first culture tube F14-2 and a discharge port of the second culture tube F14-3 to catch the drainage when the first second bottom caps F14-10 and F14-11 are detached and stored. Hashimoto does not teach coupling the same waste tube to a selective one of a first drain and a second drain by *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Hashimoto teaches a drainage tube associated with each culture tube. Hashimoto does not teach moving the same waste tube to a selective one of the first drain and the second drain.

In contrast to the teachings of Hashimoto, the multi-well rotary synthesizer of the present invention includes a controller, a plurality of precision fit vials circularly arranged in multiple banks on a cartridge, a drain corresponding to each bank of vials, a chamber bowl, a plurality of valves for delivering reagents to selective vials and a waste tube system for purging material from the vials. [Specification, p. 3, lines 8-11] The banks of vials can also be selectively purged, allowing the banks of vials to be used to synthesize different polymer chains. [Specification, p. 3, lines 8-11] The plurality of vials are held within the cartridge and divided among individual banks. [Specification, page 3, lines 15-16] Each individual bank of vials has a corresponding drain. [Specification, page 3, line 16] The reagent solution is purged from a bank of vials by rotating the cartridge until the corresponding drain is positioned above the waste tube system and coupling the waste tube system to the corresponding drain. As discussed above, Hashimoto does not teach coupling a waste tube to a selective one of a first drain and a second drain by *moving*

the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Hashimoto teaches a drainage tube associated with each culture tube.

The independent Claim 31 is directed to a method of selectively and sequentially dispensing a plurality of reagent solutions to a plurality of vials divided into a first bank of vials and a second bank of vials and selectively purging material from the first bank of vials and the second bank of vials. The method of Claim 31 comprises the steps of dispensing one or more of the plurality of reagent solutions to a selective one or more of the plurality of vials, to perform synthesis within the selective one or more of the plurality of vials, coupling a waste tube to a selective one of a first drain and a second drain within a purging system, wherein the first drain is associated with the first bank of vials and the second drain is associated with the second bank of vials, and purging material from the selected one of the first bank of vials and the second bank of vials through the purging system. It is further specified in Claim 31 that coupling the waste tube to a selective one of a first drain and a second drain comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. As discussed above, Hashimoto does not teach coupling a waste tube to a selective one of a first drain and a second drain by *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Hashimoto teaches a drainage tube associated with each culture tube. For at least these reasons, the independent Claim 31 is allowable over the teachings of Hashimoto.

The independent Claim 42 is directed to a method of selectively purging material from a selective one of a first vial and a second vial in which synthesis is taking place. The method of Claim 42 comprises coupling a waste tube to a selective one of a first drain corresponding to the first vial and a second drain corresponding to the second vial and forming a pressure differential between an interior and an exterior of the selective one of the first vial and the second vial, thereby expelling material from the selective one of the first vial and the second vial through the waste tube. It is further specified in Claim 42 that coupling the waste tube to a selective one of a first drain and a second drain comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. As discussed above, Hashimoto does not teach coupling a waste tube to a selective one of a first drain and a second drain by *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the

first drain and the second drain. Hashimoto teaches a drainage tube associated with each culture tube. For at least these reasons, the independent Claim 42 is allowable over the teachings of Hashimoto.

The independent Claim 47 is directed to a method of selectively purging material from a selective one of a first vial and a second vial in which synthesis is taking place. The method of Claim 47 comprises coupling a waste tube with a selective one of a first drain and a second drain, wherein the first drain is associated with the first vial and the second drain is associated with the second vial, forming a pressure differential between an interior and an exterior of the selective one of the first vial and the second vial, thereby expelling material from the selective one of the first vial and the second vial through the waste tube and uncoupling the waste tube from the selective one of the first drain and the second drain after the material has been purged. It is further specified in Claim 47 that coupling the waste tube with a selective one of a first drain and a second drain comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. As discussed above, Hashimoto does not teach coupling a waste tube with a selective one of a first drain and a second drain by *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Hashimoto teaches a drainage tube associated with each culture tube. For at least these reasons, the independent Claim 47 is allowable over the teachings of Hashimoto.

The independent Claim 48 is directed to a method of selectively purging material from a selective one of a first vial and a second vial in which synthesis is taking place. The method of Claim 48 comprises coupling a waste tube with a selective one of a first drain and a second drain, wherein the first drain is associated with the first vial and the second drain is associated with the second vial and purging material from the selective one of the first vial and the second vial through the waste tube. It is further specified in Claim 48 that coupling the waste tube with a selective one of a first drain and a second drain comprises *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. As discussed above, Hashimoto does not teach coupling a waste tube with a selective one of a first drain and a second drain by *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the

selective one of the first drain and the second drain. Hashimoto teaches a drainage tube associated with each culture tube. For at least these reasons, the independent Claim 48 is allowable over the teachings of Hashimoto.

**Rejections Under 35 U.S.C. § 103**

Within the Office Action, Claims 34-41, 46 and 49 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Johnson. The applicants respectfully disagree. It is recognized within the Office Action that Johnson does not teach moving the drain tube to be coupled to the waste tube. It is then concluded within the Office Action that it would have been obvious to one of ordinary skill in the art at the time of the invention that once the waste has been collected from one sample plate, the processed sample plate may be removed and replaced within another sample plate of the same format without moving the waste collection plate down from its position thereby allowing the sample plate to be moved towards and coupled to the waste tube. The applicants respectfully disagree. As discussed above, Johnson does not teach coupling a waste tube to a selective one of a first drain and a second drain by *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is coupled with the selective one of the first drain and the second drain. Johnson teaches a vacuum switch or three way valve. Johnson does not teach moving the same waste tube to a selective one of the first drain and the second drain. Accordingly, it would not be obvious from the teachings of Johnson to move a selective one of a first drain and a second drain to the same waste tube.

In contrast to the teachings of Johnson, the multi-well rotary synthesizer of the present invention includes a controller, a plurality of precision fit vials circularly arranged in multiple banks on a cartridge, a drain corresponding to each bank of vials, a chamber bowl, a plurality of valves for delivering reagents to selective vials and a waste tube system for purging material from the vials. [Specification, p. 3, lines 8-11] The banks of vials can also be selectively purged, allowing the banks of vials to be used to synthesize different polymer chains. [Specification, p. 3, lines 8-11] The plurality of vials are held within the cartridge and divided among individual banks. [Specification, page 3, lines 15-16] Each individual bank of vials has a corresponding drain. [Specification, page 3, line 16] The reagent solution is purged from a bank of vials by rotating the cartridge until the corresponding drain is positioned above the waste tube system and coupling the waste tube system to the corresponding drain. As discussed above, Johnson does not teach coupling a waste tube to a selective one of a first drain and a second drain by *moving* the waste tube to the selective one of the first drain and the second drain until the waste tube is

coupled with the selective one of the first drain and the second drain. Johnson teaches a vacuum switch or three way valve. Johnson does not teach moving the same waste tube to a selective one of the first drain and the second drain. Accordingly, it would not be obvious from the teachings of Johnson to move a selective one of a first drain and a second drain to the same waste tube.

The independent Claim 34 is directed to a method of selectively purging material from a selective one of a first vial and a second vial in which synthesis is taking place. The method of Claim 34 comprises the steps of coupling a selective one of a first drain and a second drain with a waste tube, wherein the first drain is associated with the first vial and the second drain is associated with the second vial, forming a pressure differential between an interior and an exterior of the selective one of the first vial and the second vial, thereby expelling material from the selective one of the first vial and the second vial through the waste tube and uncoupling the selective one of the first drain and the second drain from the waste tube after the material has been purged. It is further specified within Claim 34 that coupling a selective one of a first drain and a second drain with a waste tube comprises moving the selective one of the first drain and the second drain to the waste tube until the selective one of the first drain and the second drain is coupled with the waste tube. As discussed above, Johnson does not teach or make obvious coupling a selective one of a first drain and a second drain with a waste tube by moving the selective one of the first drain and the second drain to the waste tube until the selective one of the first drain and the second drain is coupled with the waste tube. For at least these reasons, the independent Claim 34 is allowable over the teachings of Johnson.

Claim 36 has previously been canceled. Claims 35, 37 and 38 are all dependent on the independent Claim 31. As described above, the independent Claim 31 is allowable over the teachings of Johnson. Accordingly, the Claims 35, 37 and 38 are all also allowable as being dependent on an allowable base claim.

The independent Claim 39 is directed to a method of selectively and sequentially dispensing a plurality of reagent solutions to a plurality of vials divided into a first bank of vials and a second bank of vials and selectively purging material from the first bank of vials and the second bank of vials. The method of Claim 39 comprises dispensing one or more of the plurality of reagent solutions to a selective one or more of the plurality of vials, to perform synthesis within the selective one or more of the plurality of vials, coupling a selective one of a first drain and a second drain with a waste tube, wherein the first drain is associated with the first bank of vials and the second drain is associated with the second bank of vials and purging material from the selected one of the first bank of vials and the second bank of vials. It is further specified



within Claim 39 that coupling a selective one of a first drain and a second drain with a waste tube comprises moving the selective one of the first drain and the second drain to the waste tube until the selective one of the first drain and the second drain is coupled with the waste tube. As discussed above, Johnson does not teach or make obvious coupling a selective one of a first drain and a second drain with a waste tube by moving the selective one of the first drain and the second drain to the waste tube until the selective one of the first drain and the second drain is coupled with the waste tube. For at least these reasons, the independent Claim 39 is allowable over the teachings of Johnson.

Claims 40 and 41 are both dependent on the independent Claim 39. As described above, the independent Claim 39 is allowable over the teachings of Johnson. Accordingly, the Claims 40 and 41 are both also allowable as being dependent on an allowable base claim.

The independent Claim 46 is directed to a method of selectively purging material from a selective one of a first vial and a second vial in which synthesis is taking place. The method of Claim 46 comprises coupling a selective one of a first drain and a second drain with a waste tube, wherein the first drain is associated with the first vial and the second drain is associated with the second vial and forming a pressure differential between an interior and an exterior of the selective one of the first vial and the second vial, thereby expelling material from the selective one of the first vial and the second vial through the waste tube. It is further specified in Claim 46 that coupling a selective one of a first drain and second drain with a waste tube comprises moving the selective one of the first drain and the second drain to the waste tube until the selective one of the first drain and the second drain is coupled with the waste tube. As discussed above, Johnson does not teach or make obvious coupling a selective one of a first drain and a second drain with a waste tube by moving the selective one of the first drain and the second drain to the waste tube until the selective one of the first drain and the second drain is coupled with the waste tube. For at least these reasons, the independent Claim 46 is allowable over the teachings of Johnson.

The independent Claim 49 is directed to a method of selectively purging material from a selective one of a first vial and a second vial in which synthesis is taking place. The method of Claim 49 comprises coupling a selective one of a first drain and a second drain with a waste tube, wherein the first drain is associated with the first vial and the second drain is associated with the second vial and purging material from the selective one of the first vial and the second vial through the waste tube. It is further specified in Claim 49 that coupling a selective one of a first drain and a second drain with a waste tube comprises moving the selective one of the first drain

and the second drain to the waste tube until the selective one of the first drain and the second drain is coupled with the waste tube. As discussed above, Johnson does not teach or make obvious coupling a selective one of a first drain and a second drain with a waste tube by moving the selective one of the first drain and the second drain to the waste tube until the selective one of the first drain and the second drain is coupled with the waste tube. For at least these reasons, the independent Claim 49 is allowable over the teachings of Johnson.

Applicants respectfully submit that the claims, as amended, are now in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,  
HAVERSTOCK & OWENS LLP

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**CERTIFICATE OF MAILING (37 CFR § 1.01(c))**

I hereby certify that this paper (along with any references being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450

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